

LEGUMES OF THE UNITED STATES: III. SCHRANKIA¹

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The objectives and format of these publications have previously been presented (Isely, 1969). Accessions of *Schrankia* from the following herbaria were studied during preparation of this paper: New York Botanical Garden (NY), Iowa State University (ISC), University of Texas (TEX), New Mexico State University (NMC), University of Arizona (ARIZ), University of Southwestern Louisiana (LAF), Mississippi State University (MISSA), Florida State University (FSU), and the University of South Florida (USF). Selected materials and (or) types have been studied courtesy of the following: Southern Methodist University (SMU), Gray Herbarium (GH), Missouri Botanical Garden (MO), Lundell Herbarium (LL), U.S. National Museum (US), and the Philadelphia Academy of Natural Sciences (PH). My thanks to the institutions and herbarium curators.

SCHRANKIA Willd.

Prickly, sprawling or ascending to subscandent, herbaceous (in U.S.) perennials. Stems tetragonal to ribbed-terete. Prickles internodal, mostly curved, widened to base, thinly or closely dispersed on stems, leaf petioles and rachises, peduncles and fruits. Leaves eglandular, twice-pinnate, usually sensitive. Pinnae (1)2—8. Leaflets several, small, mostly 2—5 mm long, nearly symmetric, with a midvein, with or without secondary venation. Stipules subulate, 2—6(10) mm in length. Peduncles axillary, 1—3, often approximating leaves. Flowers perfect or uppermost staminate, in bright to pale pink heads. Calyx campanulate, reduced. Corolla cylindric, ca 3 mm long, the tube longer than lobes. Stamens ca 10. Pods oblong, usually quadrangular and beaked, conspicuously prickly (rarely smooth); margins broad, separating from valves at maturity.

Primarily Mexico and the southern U.S.; scantily to South America, one species extending northward in the U.S. Introduced in Old World tropics. Possibly 15 species.

Chromosome number $X = 13$, based on six species.

Schrankia is a small, coherent group of undoubted evolutionary unity. A *Mimosa* derivative, it is characterized not only by its non-segmented

¹ Journal Paper No. J-6443 of the Iowa Agricultural and Home Economics Experiment Station, Ames, Iowa. Project 1814. The facilities of the Iowa State Herbarium supported by the Science and Humanities Research Institute were used in the preparation of this paper. This research is funded by the National Science Foundation, Grant GB-7342.

tetragonal pods in which the sutures in most species are broadened to approximately the width of the valves, but by its moderately consistent aspect and habit.

Chromosome base numbers of 13 are common to *Schrankia* and *Mimosa* as well as many other mimosoids. Of *Schrankia* species reported all are diploids except *S. leptocarpa* DC., a tetraploid (Frahm-Leliveld, 1957). A determination of $2n = 24$ for *S. microphylla* (Atchison, 1949) is anomalous, as Turner and Fearing (1960) have previously noted.

I present a review of U.S. *Schrankia* with less than unqualified satisfaction. The amorphous nature of the taxa, and my knowledge that alternative interpretations may have merit lead to disquietude. A leisurely study of the genus in its entirety might—perhaps with expansion of methods—render taxonomic decisions less conjectural. But there has been such a study: *Schrankia* is the subject of a recent, unpublished, monographic investigation (Beard, 1963). The Beard manuscript contains much useful information concerning *Schrankia*. It includes several postulates which, on basis of my geographically limited studies, I cannot properly evaluate. However, it is necessary to take issue with the major premises.

Beard abandons *Schrankia*, submerging it under *Mimosa*. Furthermore, he reduces the genus to one species, *Mimosa quadrivalvis* L. He says “Absolutely no character has been found that can be said to be peculiar to *Schrankia* apart from *Mimosa* L. emend. Benth. It is concluded that to maintain *Schrankia* Willd. as a genus distinct from *Mimosa* L. while subscribing to the broad concept of the latter genus as maintained by most recent botanists publishing in the group is indefensible, and therefore *Schrankia* Willd. must be recombined with *Mimosa* L.”

Reserving philosophical response to the Beard proposition, I comment only in a pragmatic vein: (1) The characters of *Schrankia* are congruent to the degree that the genus is more easily recognized—even by the uninitiated—than most mimosoid genera. (2) Were Beard’s viewpoint of generic delimitation taken up for the Mimosoideae as a whole, the subfamily (family of many authors) would probably have to be reduced to 1 or 2 genera. I doubt that this would be practical or reasonable.

Beard’s second prescript is that *Schrankia in toto* represents a single species. Perhaps my presentation recognizes too many species (e.g., *S. hystricina*, a geographic variant of *nuttallii*; *S. latidens*, an element of a polymorphic Mexican complex). But I find Beard’s position somewhat extreme. Both Beard and I indeed have observed that several of the subordinate taxa are “messy.” Beard mentions intermediates between geographically contiguous taxa (but the number of such cited is very small in proportion to the total number of sheets seen). Many taxa lacking compatibility barriers betray such sins. Their “virtue” has been dependent on ecological or geographic isolation; but many such isolations have been eliminated or reduced by man’s subjugation of the world.

The most useful regional summary of *Schrankia* is that of Turner (1959)

- often exceeding 2 mm in diameter; central Texas, east to Frio, Travis, and Dallas Co's. *S. roemeriana*
6. Pod tetragonal, 2—3(4) mm wide; pinnae 2—4(5) pairs; petiole usually exceeding rachis; stems frequently quadrangular above and less than 2 mm in diameter; eastern and southern Texas—northwest margin of range through Zavala, Comal, and Robertson Co's. *S. latidens*

SCHRANKIA HYSTRICINA (Britt. & Rose) Standl.

Southeastern Texas (Matagorda Co. north to Shelby Co., west to Brazos Co.) and adjacent southwestern Louisiana. Pine woodlands, coastal grassland; disturbed areas, roadside, etc.; moist, sandy soils. Locally frequent. (March) April—June.

Chromosome number $2n = 26$ (Turner and Beaman, 1953)

This taxon seems to be *Schrankia nuttallii* except as to total size, the usually elongate peduncles, the large heads, and sometimes exerted floral bracts, and the short, very prickly pods. Plants possessing most of these characters occupy a discrete geographical area wherein they essentially replace *S. nuttallii*. Character correlation is somewhat loose-knit: viz, a few specimens beyond the range of *S. hystricina* have unusually prickly pods, but these (the pods) are longer than those of *hystricina*; not all *hystricina* possess the distinguishing bracts; some material without unusually long peduncles possesses the characteristic *S. hystricina* pods; vigorous *S. nuttallii* may have long peduncles. B. L. Turner has commented (personal correspondence): "It [*S. hystricina*] is a much larger plant than *S. nuttallii*. To my knowledge it does not grow with *nuttallii*, occupying a wetter habitat. It acts like a species."

I define *S. hystricina* on the basis of pod-range correlation but am inclined to the view that the case for specific rank may be moot.

The pods range from brick-shaped-tetragonal to as flat as those of *S. roemeriana*. This variance may, in part, represent a function of maturity—the sutures widening after the valves.

Schrankia hystricina (Britt. & Rose) Standl. Field Mus. Publ. Bot. 8:13. 1930! *Leptoglottis* HYSTRICINA Small ex Britt. & Rose N. Am. Fl. 23:139. 1928! Type NY! Isotypes MO! and US! Hall 170.

Hall 170 at both NY and MO is heterogeneous, probably representing more than one gathering. Among this material, I have designated a type which is congruent with the description of *S. hystricina*.

SCHRANKIA LATIDENS (Small) Schum.

Eastern and southern Texas. Mexico. Ranging from oak woodlands in northern part of range to grassland and thorn scrub in south; mostly sandy or gravelly soils, often semiweedy along roadsides and disturbed areas. (March) April—July (Sept.)

Chromosome number $2n = 26$ (Turner and Fearing, 1960).

Schrankia latidens represents the northern outlier of an extensive Mexican complex which possesses relatively few pinnae, nonreticulate leaflets and usually angular stems. I have taken the position that the U.S. representatives and some of the Mexican phenotypes represent elements of a single species. I do not know whether the complex in entirety should be best considered one or several species. It has not been easy to garner interpretive satisfaction from Beard (1963) who includes *S. latidens* under *Mimosa quadrivalvis* subspecies *quadrivalvis*, variety *quadrivalvis*, ecotype 4 (I am neither accepting nor publishing this combination.).

Thus, *Schrankia latidens* of the present treatment is approximately traditional except that material of the eastern Texas oak woods region formerly assigned to *S. microphylla* (e.g., Turner, 1959) is herein regarded as the northern phase of *latidens*. I distinguish *S. latidens* from *S. microphylla* of the eastern coastal plain on a combined geographic-morphological basis: (1) They are geographically disjunct. (2) *S. microphylla* possesses mostly (4)6—8(11) pairs of pinnae and 9—12 pairs of leaflets; the stems are angular-terete to infrequently nearly quadrangular. *S. latidens* has 2—4(5) pairs of pinnae and 5—9 pairs of leaflets; the stems, particularly in the southern part of the range, are frequently distinctly quadrangular.

Schrankia microphylla excluded, Texas *Schrankia* with nonreticulate leaflets then includes three closely related species. *S. occidentalis* is reasonably distinct on the basis both of range and morphological characters. *S. latidens* and *S. roemeriana* possibly represent an intergradient complex: *S. latidens*, eastern and coastal plain sands, and *S. roemeriana*, interior, limestone. Their differentiation is discussed under the latter species. After extraction of *S. roemeriana*, the heterogeneous residue is then *S. latidens*. I recognize this material is not all of a type, but I can neither presently justify several species as some authors have done, nor accept the opposite extreme advocated by Beard (1963).

The pods of *Schrankia latidens* are diverse in degree of prickliness, length, and width. Their form ranges from stubby (ca 4 cm), and heavily prickly, to narrowly linear (to 16 cm in length), somewhat sinuous, and lightly prickly.

Leptoglottis halliana Britt. & Rose, as to description, is *S. latidens* minus prickles on the pods. Beard (per annotations) has marked certain specimens with long, slender pods as *S. halliana*.² Some of these specimens have almost unarmed pods; some are quite prickly. Possibly (as in *S. microphylla*) pod variance has biological significance; however, the proportion of specimens with "good" pods is so low that correlation with other characters or range is difficult to study.

Schrankia latidens of the southern coastal plain includes populations of vigorous plants that possess 3—4 pinnae, and have larger heads than

² Beard employed two annotation "systems" during his work. His use of *Schrankia* binomials seems mostly post 1963.

“typical” *S. latidens*. They resemble, in these ways, *S. roemeriana* of the interior. But the pods when present are not those of *S. roemeriana*. Beard (annotations) has taken up *S. nelsonii* (Britt. & Rose) for some of this material.

One collection, Cory, 9/27/44, Aransas Co., Texas (FSU) is a reduced *latidens*-like “thing.” The stems are filamentous-slender and obscurely prickly, and the leaves bear only 1—2 pinnae at the ends of long petioles; the moderately prickly pods are narrow-linear and well beaked. Except for the pod beak, this gathering matches the description and type of the Mexican *Schrankia potosina* (Britt. & Rose) Standl. and it has been marked by Hermann “first record outside Mexico.” Beard has annotated a few Mexican sheets as *Schrankia potosina*; they are vegetatively as above but possess short, heavy, scarcely beaked pods. In view of the total range of variance within this complex I refer *S. potosina* to *S. latidens*.

Schrankia latidens (Small) Schum. Bot. Jahresb. 29:540. 1903! *Morongia LATIDENS* Small Bull. N.Y. Bot. Gard. 2:98. 1901! Type NY! Isotype US! Heller 1779. *Leptoglottis latidens* (Small) Britt. & Rose N. Am. Fl. 23:142. 1928!

Schrankia aculeata var? Benth. Trans. Linn. Soc. Lond. 30:441. 1875! *Leptoglottis BERLANDIERI* Britt. in Britt. & Rose N. Am. Fl. 23:144. 1928! Type NY! Isotype MO! and GH! Berlandier 2513. *Schrankia berlandieri* (Britt.) Standl. Field Mus. Publ. Bot. 11:159. 1936!

Leptoglottis HALLIANA Britt. & Rose N. Am. Fl. 23:141. 1928! Type NY! Isotypes MO! US! GH! Hall 171. *Schrankia halliana* (Britt. & Rose) Standl. Field Mus. Publ. Bot. 8:13. 1930!

Leptoglottis POTOSINA Britt. & Rose N. Am. Fl. 23:143. 1928! Type US! Isotype GH! Purpus 5177. *Schrankia potosina* (Britt. & Rose) Standl. Field Mus. Publ. Bot. 11:159. 1936!

Leptoglottis NELSONII Britt. & Rose N. Am. Fl. 23:142. 1928! Type US! Isotype GH! Nelson 6230.

As indicated in the taxonomic discussion, I have not been able to reach a firm decision concerning the relationships of *Schrankia latidens* and its Mexican allies. My circumscription (a provincial one), includes U.S. and Mexican elements which I can refer to one species with considerable confidence. But the complex to which this species belongs includes several older names—herein excluded: *Mimosa quadrivalvis* L. (1753), *Schrankia aculeata* Willd. (1806), *S. mexicana* Raf. (1836), and *S. subinermis* Wats. (1882). The critical earlier epithets boil down to one; *aculeata* is an illegitimate substitute for *quadrivalvis*. *Schrankia quadrivalvis* (L.) Merrill is probably the correct name for this entire group in the event it is considered a single species.

The type (NY) of *Morongia latidens* Small is a vigorous plant with short, long-beaked, heavily prickly pods. A designated isotype (MO!) bearing the same collection number as the type at NY must be excluded. It is *S. roemeriana*! *Leptoglottis berlandieri* (based on the same collection as

Bentham's *S. aculeata* var?) possesses but weakly prickly pods. *Leptoglottis halliana* per description is *latidens* with very slender, long-beaked pods that are nearly unarmed. There are three specimens at NY of Hall 171. Only one of them bears smooth pods; I consider it the type. Duplicates at GH and US are likewise diverse in pod characters. The types of *Leptoglottis nelsonii* and *potosina* represent Mexican forms which I believe clearly fall within *S. latidens*.

SCHRANKIA MICROPHYLLA (Dryand.) Standl.

Southern and southeastern coastal plain; southernmost Virginia, Florida, to eastern Louisiana. Openings or margins of pine or hardwood woodlands, in Florida with turkey oak and pine-palmetto; disturbed, eroded or burnt-over areas, roadsides, sandy to loam soils. (April) May—June or in southern Florida essentially all year.

Chromosome number $2n = 16$ (Atchison, 1949)

Schrankia microphylla and *S. nuttallii* represent the major complexes of this genus in the United States, the former primarily of the southeastern, the latter of the central states.

In broad scope, *S. microphylla* is reasonably consistent morphologically. Populations and individual plants differ primarily in degree of prickliness, vigor, presence or absence of puberulence, and shape and prickliness of the pods. Pubescence variation has some geographic orientation and may be of significance taxonomically: e.g., most Florida populations are glabrous; most Alabama and Carolina, puberulent; and most Louisiana, puberulent. I have had little opportunity to attempt interpretation of pod variation because so few specimens possess fruit.

My circumscription of *S. microphylla* includes two variants convenient to discuss by name even though I am not according them taxonomic rank. They are as follows:

BRACHYCARPA variant (var. *brachycarpa* Chapm.; *S. chapmani* Britt. & Rose)

Louisiana, Florida, to North Carolina. Habitat as var. *microphylla*.

Extreme forms of *brachycarpa* are distinctive. They have short pods (mostly 3—5 cm long) which are intensely prickly; the prickles are much widened toward the base; the pods possess little or no beak. This entity has been given specific rank by Small (1933) and Britton and Rose (1928).

But one encounters intermediates toward the *microphylla* pod (for example, excessively prickly pods which are, however, elongate, beaked or not). I find no other exomorphic characters correlating with the distinctive pod (thus no way of telling if flowering material will possess the *brachycarpa* pod), and *brachycarpa* seems to have no discernible distributional patterning, being sporadic throughout the range of the species. The genetic complex resulting in this pod type occurs likewise in the *S. nuttallii* group as *S. hystericina* but, in this instance, with geographic orientation.

I am presently considering *brachycarpa* as a recurrent phenotype within *microphylla* populations.

ANGUSTISILIQUEA variant [*Schrankia angustisiliquea* (Britt. & Rose) Hermann]

Florida. Pinelands, pine-palmetto, disturbed areas. March—May or all year.

Schrankia microphylla is progressively less robust as one proceeds southward in Florida. The extreme forms, in southern Florida, where they make up most of the *microphylla* populations, possess filiform, usually square, glabrous stems; the pinnae are usually 4—5 pairs; the leaflets are small, not exceeding 2 mm; flower heads are 1 cm or less in diameter; and the pods are slender, but moderately prickly.

The *angustisiliquea* variant thus differs from typical *microphylla* in a number of features. But its irregularly clinal nature seems to defeat any merit in according it taxonomic recognition.

Schrankia microphylla (Dryand.) MacBride Contr. Gray Herb. 59:9. 1919!

Mimosa MICROPHYLLA Dryand. in J. E. Smith Insects Georgia 2:123. 1797! *Morongia microphylla* (Dryand.) Britt. ex Britt. & Brown Ill. Fl. ed. 2, 2:334. 1913! *Leptoglottis microphylla* (Dryand.) Britt. & Rose N. Am. Fl. 23:142. 1928! *Schrankia microphylla* (Dryand.) Standl. Field Mus. Publ. Bot. 8:13. 1930!

Mimosa HORRIDULA Michx. Fl. Bor. Am. 2:254. 1803! Photo of type (from P) ISC! *Schrankia horridula* (Michx.) Chapm. Fl. South. US. ed. 2. 683. 1892! *Morongia horridula* (Michx.) Heller Cat. N. Am. Pl. 5. 1898!

Schrankia ANGUSTATA T. & G. Fl. N. Am. 1:400. 1840! *Morongia angustata* (T. & G.) Britt. Mem. Torr. Bot. Club 5:191. 1894!

Schrankia angustata BRACHYCARPA Chapm. Fl. South. U.S. 116. 1860! non *S. brachycarpa* Benth. 1840! *Leptoglottis chapmanii* Small ex Britt & Rose N. Am. Fl. 23:141. 1928! *Schrankia chapmanii* (Small ex Britt. & Rose) Hermann Jour. Wash. Acad. Sci. 38:237. 1948!

Schrankia horridula var. ANGULARIS Chapm. Fl. South. US. ed. 3. 127. 1897! Type US! Chapman "Fence rows near Rome, Georgia . . . var. *angularis*" (Chapman handwriting). *Morongia horridula angularis* (Chapm.) Heller Cat. N. Am. Pl. 5. 1898!

Leptoglottis ANGUSTISILIQUEA Britt. & Rose N. Am. Fl. 23:143. 1928! Type US! Small & Mosier 6349. *Schrankia angustisiliquea* (Britt. & Rose) Hermann Jour. Wash. Acad. Sci. 38:237. 1948!

As to concept:

Mimosa intsia sensu Walt. Fl. Carol. 252. 1788! "*M. intsia* Walt." auct. pl. non *M. intsia* L. 1753!

The first binomial traditionally referred to this species is "*Mimosa intsia* Walt." (1788, loc. cit.). But *Mimosa intsia* of Walter was not proposed as

a new name; it is simply a misapplication of the Linnaean *Mimosa intsia* as MacBride (1919) noted some years ago.³

The identity of *M. intsia* sensu Walt. with *M. microphylla* is reasonable but unequivocal demonstration has been lacking. Britten (1920) reported Walter's plant as *S. microphylla* but his dubiousness concerning the mutual discernibility of *S. uncinata* (*nuttallii*) and *microphylla* ("I can see no sufficient differences between them") essentially nullifies his observation. Dr. N. K. B. Robson has kindly responded to an inquiry to the British Museum as follows (personal correspondence): "The specimen of *Mimosa intsia* is on p. 73 of the Walter volume. From a comparison with material in our main collection, it seems that the Walter specimen does belong to *Schrankia microphylla*." But combinations based on "*Mimosa intsia* Walt." [*Schrankia intsia* (Walt.) Trelease ex Branner and Coville, 1891; *Leptoglottis intsia* (Walt.) Rydb., 1894] are largely *Schrankia nuttallii* as to concept.

Mimosa microphylla Dryand. is clearly identified by the plate. Some authors attribute this species to Solander. The Solander case is presented by Britten (1920). I have accepted the credit line in the original publication as appropriate identification of authorship. I have previously discussed the identity of *M. horridula* Michx. (Isely, 1957). Torrey & Gray's description of *S. angustata* indicates their concept to lie largely (if not entirely) within the circumscription of *S. microphylla*. They cite three specimens. I have seen two gatherings (both *S. microphylla*) at GH which probably represent part of the original material; but label data does not coincide with the published citations.

The description of *Leptoglottis angustisiliqua* Britt. & Rose suggests that the original material might have been *S. uncinata*. The type, however, is the slender-podded, tenuous, Florida form of *S. microphylla*. Britton and Rose state "Pinelands of Florida, and in Texas." The nature of Texas material is conjectural, possibly *S. latidens*.

The only Chapman sheet I have seen marked as *Schrankia angustata* var. *brachycarpa* is US! "S fl. Florida." It is reasonably consistent with the description except that the slender, strongly prickly pods scarcely deserve the epithet *brachycarpa*.

SCHRANKIA NUTTALLII (Britt. & Rose) Standl.

Illinois, South Dakota, Texas, Louisiana. Prairies, open woodlands, clearings, roadsides and other disturbed sites, usually sandy or rocky soil, frequent and often abundant. April (south)—July (north).

Chromosome number $2n = 26$ (Turner and Beaman, 1960)

This *Schrankia*, the most widely distributed species, extends further

³ Walter complicated matters for posterity by providing no citations to previous authors. But most of his new species are in italics—which *M. intsia* is not. Also, his diagnosis is almost identical with that of the Linnaean *M. intsia*.

north in the U.S. than any other mimosoid—*Desmanthus illinoensis* and the introduced *Albizia julibrissin* are the closest competitors. It is an inhabitant of grasslands and of the contiguous wooded provinces. It has been reported from several of the southeastern states, presumably because of erroneous determinations of *S. microphylla* or *S. uncinata*. *S. hystericina*, southern Louisiana, is probably a geographical segregate of *S. uncinata*, but the pods are so different that I am retaining it as a species.

Leptoglottis nuttallii DC ex Britt. & Rose. Fl. N. Am. 23: 139. 1928!
Leptoglottis NUTTALLII DC. Mem. Leg. 451. 1827! nom. invalid. Presumed fragment of type NY! Nuttall "Hab . . . territorio Arkansano." *Schrankia nuttallii* (Britt. & Rose) Standl. Field Mus. Publ. Bot. 8:13. 1930!

Leptoglottis MIMOSOIDES Small ex Britt. & Rose N. Am. Fl. 23: 109. 1928!
 Type NY! Ruth 13.

As to concept:

Schrankia intsia (Walt.) Trelease ex Branner & Coville. Plants Ark. 178. 1891! *Leptoglottis intsia* (L.) Rydb. Bot. Surv. Neb. 3: 33. 1894! neque *M. intsia* L. 1753!; neque *M. intsia* sensu Walt. 1788!

Schrankia uncinata auct. pl. non Willd. 1806! *Leptoglottis uncinata* (Willd.) Rydb. Fl. Nebr. 21: 31. 1895!

Neither the DeCandolle description nor the fragmentary isotype seen provide an unequivocal distinction between *S. hystericina* (Britt. & Rose) Standl. and *S. nuttallii* DC. The cited collection, a Nuttall sheet "Hab . . . in Americae borealis territorie Arkansano (V.S. in herb. Mercier.)," is not represented in the DeCandolle herbarium (microfiche examination). The unavailability of the original specimen is noted by Beard (1963). I render the conventional determination: that the material is probably of the widely distributed species rather than its local derivative.

See *Schrankia uncinata* for typification of that specific epithet.

Leptoglottis mimosoides is characterized on the basis of flattened pods; those of the type are indeed somewhat less than quadrangular and perhaps the plant possesses some degree of genetic intermediacy with *S. roemeriana*. The NY type is designated "RR embankment 5 miles from Fort Worth." Two MO "isotype" sheets possess the same collection number but "Valley of the Trinity, 6 miles from Fort Worth, June 10, Aug. 5, 1912." They probably represent another gathering. A US "type" apparently constitutes yet a third collection.

Beard (1963) rejects *Leptoglottis nuttallii* of DC. 1827, and attributes the name to DC. ex Britt. & Rose N. Am. Fl. 23: 139. 1928. He reasons that DeCandolle published the genus *Leptoglottis* "provisoirement," and since the single species *L. nuttallii* was presented following a combined generic-specific diagnosis, it was not validly published. Although there was no uncertainty in DeCandolle's viewpoint of the new species: "il

s'est présenté à moi une belle espèce de Mimosée," (his indecision related only to the generic relationships of his plant.), Beard's position is correct.⁴ Valid publication of *L. nuttallii* seems not to have occurred until 1928 (Britton & Rose, loc. cit.). Thus, *L. nuttallii* is thrown into priority competition with the century later but simultaneously published *L. mimosoides* Small ex Britt. & Rose (loc. cit.). Beard (loc. cit.) seems to be the first individual to have chosen one of these epithets (*nuttallii*) relegating the other (*mimosoides*) to taxonomic synonymy.⁵

SCHRANKIA OCCIDENTALIS (W. & S.) Standl.

Eastern New Mexico and western Texas. Sandy soils, dunes to roadsides. April—June (Sept.).

Chromosome number $2n = 24$ or 26 (Turner and Beaman, 1953; Turner and Fearing, 1960).

This, the westernmost species of *Schrankia*, can usually be easily determined by its distribution and slender, coarsely prickly pods. I cannot credit MacBride's assertion that "*Morongia occidentalis* . . . seems to merely be a pubescent state of *S. roemeriana*." MacBride must have had only flowering and immature fruiting material available.

A sand dune form (Winkler Co., Texas) is distinctive being almost unarmed and glabrate; the leaves possess 6—9 pairs pinnae to 20 pairs of tiny (ca 2 mm long) leaflets.

Schrankia occidentalis (W. & S.) Standl. Field Mus. Publ. Bot. 8:13. 1930! *Morongia OCCIDENTALIS* Wooten & Standley Contr. U.S. Natl. Herb. 16:135. 1913! Type US! Isotypes MO! GH! Fisher, Nara Visa, New Mexico. July 4, 1911. *Leptoglottis occidentalis* (W. & S.) Britt. & Rose N. Am. Fl. 23:140. 1928!

SCHRANKIA ROEMERIANA (Scheele) Blankinship

Northcentral Texas south to Frio Co. Rocky limestone soils; prairies, or with mesquite and oak; roadsides. April—July.

Chromosome number $2n = 26$ (Turner and Fearing, 1960).

Schrankia roemeriana replaces *S. latidens* to the north and west of the latter; *S. roemeriana* is primarily of limestone soils, *latidens* of sands. The two are marginally sympatric, and I cannot always distinguish non fruiting material. In general, *S. roemeriana* is more robust, has larger leaves with more pinnae, proportionally shorter petioles, larger flowering heads, and rarely square stems. I have the impression that southern material of *S. roemeriana* adjacent to *S. latidens* tends to have fewer pinnae and

⁴ "A name of a taxon below the rank of genus is not validly published unless the name of the genus or species to which it is assigned is validly published at the same time or was validly published previously." (Lanjouw, 1966; Article 43).

⁵ Cory and Parks Cat. Fl. Tex. 60. 1937 took up *S. nuttallii* but cited only *S. uncinata* auth as synonym. Other authors who have treated Texas *Schrankia* (e.g. Turner, Shinnery, Gould, Reeves and Bain) designated the species *S. uncinata*.

leaflets than gatherings further north. But the range of variation is considerable in both species and includes robust phenotypes well within the *latidens* range (assigned to that species).

Do the two species blend biologically? From limited fruiting material, I have little evidence that they do. This is the major reason I have maintained them as distinct species. Pod shape in both species is variable but generally distinctive. Some pods of *roemeriana* lack the ideal compressed form; "stubby" types show up in *latidens* as in *microphylla* in the eastern part of the country. With only one exception, "aberrant" fruiting specimens are not from areas that suggest genetic influence from the other species. The exception is from Frio Co. where *S. roemeriana* and *latidens* overlap. There, the pod characters of one collection (Tharp and Turner 3457) suggest a blend of the two kinds.

Schrankia roemeriana (Scheele) Blankinship Rept. Mo. Bot. Gard. 18:168. 1907! *Mimosa* ROEMERIANA Scheele Linnaea 21:456. 1848! *Morongia roemeriana* (Scheele) Heller Contr. Herb. Frank & Marsh Coll. 1:44. 1895! *Leptoglottis roemeriana* (Scheele) Britt. & Rose N. Am. Fl. 23:140. 1928!

Schrankia PLATYCARPA Gray Bost. Jour. Nat. Hist. 6:183. 1850! Type GH! Isotypes MO! US! Lindheimer 384.

Leptoglottis reverchonii Britt. & Rose N. Am. Fl. 23:140. 1928! Type NY! Reverchon, Calcareous prairies. Dallas, Texas 1877.

I have not seen the original material of Scheele's *M. roemeriana*. The locality "Propre Neubraunfels," in light of known ranges of Texas *Schrankia*, specifies this species. Several Lindheimer specimens designated as from the type locality are *S. roemeriana*.

Gray's superfluous *S. platycarpa* was described in full knowledge of Scheele's *M. roemeriana* because "that blundering and unscrupulous propounder of species had not seen the legumes." (Gray's isotype at US possesses no fruit.)

Leptoglottis reverchonii is said to differ from *S. roemeriana* in that the "legume is scarcely beaked; its valves long-prickly." The pods of the type specimen are, within the total range of *M. roemeriana*, scarcely unusual.

SCHRANKIA UNCINATA Willd.

Central peninsular Florida (south on west side to Lee Co.), north in eastern Florida to southernmost Georgia. Pinelands, sandy disturbed areas, white sand scrub, open turkey oak woodlands. Dec.—Sept.

Some material of this species is difficult to sharply discern from *S. microphylla* by any characters save leaf venation, yet I suspect it may be more closely related to the noncontiguous *S. nuttallii*. The leaves possess fewer pinnae than typical *S. microphylla*, and usually larger leaflets than the sympatric *angustisiliqua* variant of *S. microphylla*. A more robust habit,

relatively few, broad-based prickles, and shorter peduncles are often—but not invariably—characteristics of *S. uncinata*.

Schrankia UNCINATA Willd. Sp. Pl. 4:1043. 1806! Photo of type (from B) ISC! Herb. Willdenow 19099 "*Schrankia uncinata*." *Morongia uncinata* (Willd.) Britt. Mem. Torr. Bot. Club 5:191. 1894! *Leptoglottis uncinata* (Willd.) Rydb. Fl. Nebr. 21:31. 1895! quoad basionym.

Schrankia FLORIDANA Chapm. Fl. South. US. ed. 2. 683. 1892! Presumed fragment of type NY! Manatee, Florida. *Morongia floridana* (Chapm.) Small ex Britt. & Rose N. Am. Fl. 23:139. 1928!

Torrey & Gray (1840) took up the binomial *S. uncinata* Willd. for the widely distributed species of the central United States and the name was so employed for nearly a century. Standley (1930) presumably noting that most of Willdenow's citations ultimately traced to *S. microphylla*, assigned the name to that species. In 1957, I examined a photograph of the Willdenow original material and leaflet fragments; the leaflets were evidently nerved and the Willdenow description consistent with the specimen. I properly dismissed reference to *S. microphylla* but less wisely allowed the name to revert to its traditional connotation. Beard (1963) has presented a detailed exposition of the identity of the Willdenow material and refers it to the Florida entity. I accept his conclusions.

Chapman's description of *S. floridana* (sandy barrens, southern Florida) specifies that the leaflets are reticulate beneath. A putative fragment of type material at NY represents a couple of leaves and a flower head with the annotation: "from type specimen." Presumably types of Chapman's 1892 Supplement species are at US; but I have been unable to find a specimen pertinent to this binomial.

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